

REMARKS/ARGUMENT**Regarding the Claims in General:**

Claims 1-18 remain pending. Claims 1-9 and 11-18 are unchanged but some of these claims have been reformatted to improve readability. Also, claim 10 has been amended to better highlight a distinguishing features of the invention, and has been reformatted.

Regarding The Allowable Subject Matter

Applicants note with appreciation the indication that claims 9, 12, 13, 17, and 18 would be allowed if rewritten in independent form incorporating the limitations of their respective parent claims. Because these claims are dependent on claims 1, 10 or 14, which are believed to be allowable for the reasons discussed below, claims 9, 12, 13, 17, and 18 have been retained in dependent form pending the Examiner's further consideration.

Regarding the Prior Art Rejections:

In the outstanding Office Action, claims 1-8, 10, 11, 14, and 15 were rejected as anticipated by Nishiura et al. U.S. Patent 6,112,974 (Nishiura), and claims 1, 3-8, 11, and 14-16 were rejected as anticipated by Mochida U. S. Published Patent Application 2004/0041008 (Mochida). Applicants respectfully traverse these rejections.

Although the prior art documents cited by the Examiner do relate to wire bonding, they do not disclose, teach or suggest the present invention. In particular, claim 1 is directed to a method of bonding a wire between first and second bonding points. Among the important benefits of the invention, as described in the specification, are the ability to strengthen the neck portion of the bonded wire, and consequently, that the overall loop height can be lowered with reduced risk of neck crack (see page 3, lines 7-16).

Claim 1 recites (*inter alia*) the following steps:

forming a first bond at the first bonding point with the bonding tool;

moving the bonding tool away from the first bond by a first distance;

moving the bonding tool towards the first bonding point and coupling the wire to the first bond . . .

The first two of these steps reflect conventional bonding practices as embodied in Nishiura or Mochida, but the third step is definitely not disclosed, taught or suggested in either reference. The prior art simply does not recognize the benefit that can be derived from bringing a portion of the wire back to the first bonding point and coupling that portion to the first bond.

In this connection, the Examiner's attention is respectfully directed to the fact that in the rejections, she has correctly pointed out the presence of the first two steps recited above, but she has made no mention of the third element. Be that as it may, with this distinguishing feature not disclosed, taught, or suggested in the prior art, claim 1 can not be considered as anticipated, and should be allowed.

With regard to independent claim 10, a distinguishing feature of a wire bond according to the invention is that the neck portion does not extend vertically upwards, but instead, the loop between the bond points extends transversely from the top of the base portion. This is illustrated, for example, in Fig. 4 of the drawing hereof, and described at page 6, lines 24-31 of the specification. In contrast, both Nishiura and Mochida disclose neck portions with substantial neck heights (see neck height 31, Col. 1, lines 28-30 and Col. 3 lines 35-37 of Nishiura, and the last sentence of paragraph [0008] of Mochida).

While it is believed that this feature would have been recognized by a person skilled in the art from the recitation of "... extending from the neck portion substantially transversely to an axis. . ." in claim 10 as originally presented, the claim has been amended to highlight this even more forcefully. Thus, claim 10 now recites:

a wire extending from the neck portion substantially transversely to
an axis passing through the base portion and the neck portion at
substantially the same height as the top of the base portion.

Since this feature is not disclosed, taught or suggested in the cited prior art, claim 10 should also be allowed.

Independent claim 14 focuses on another distinguishing feature of a wire bond according to this invention, namely:

a curved portion integrated with a side of the base portion which twists in a direction substantially transverse to an axis passing through the base portion and a bonding point of the wire bond.

As explained in connection with claim 1, in both Nishiura and Mochida, the neck portions extend vertically upwards from the base portions, and then away from the base portion, and are not twisted next to the side of the base portion, as illustrated in Fig. 6 of the drawing hereof. Nor does the Examiner even mention this feature in her rejection of claim 14. Since the prior art does not disclose, teach or suggest a wire bond in which a portion of the wire extending from a first bond point curves back on itself, twists, and is integrated with the initial bond, claim 14 should also be allowed.

Rejected claims 2-8 and 15-16 are respectively dependent on allowable claims 1 and 14, and are also allowable for the reasons stated above. In addition, these claim recite features which, in combination with the features of their respective parent claims are neither taught nor suggested in the Nishiura and Mochida references, whether considered alone or in combination.

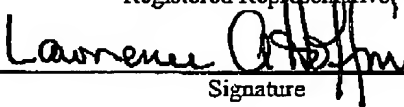
Regarding Other References Cited by the Examiner

The other references cited by the Examiner but not applied have been considered, but the present claims are not believed to be anticipated or rendered obvious by these references.

In view of the foregoing, favorable reconsideration and allowance of this application are respectfully solicited.

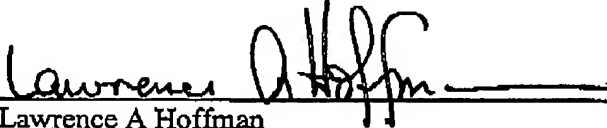
I hereby certify that this correspondence is being transmitted by Facsimile to (703) 872-9306 addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

Respectfully submitted,

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Signature

January 19, 2005
Date of Signature



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